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Building & Highway Material Testing Laboratory

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T-2377

Job No.: CTCE/BBMP/KRIDL/W.No.12/CSR-05/029m/CEMENT/2016-17 Date: 05.05.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*AGENCY	:	**Technical Manager (West),** KRIDL, Bangalore.
*NAME OF THE WORK	:	Emergency Reserve Fund (Desilting and Construction of RCC Drain Veeranjaneya Badavane Abbigere Village near Bus Stop) in Ward No.12 of Shettyhalli Sub Division, BBMP, Bangalore.
REFERENCE	:	EE/DD/WO/112/2015-16 Dated: 31.03.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	03.05.2016
PERIOD OF TESTING	:	03.05.2016 to 05.05.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	480 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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Technical Manager

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Job No.: CTCE/BBMP/KRIDL/W.No.12/CSR-05/029m/SAND-Gradation/2016-17 : 05.05.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Emergency Reserve Fund (Desilting and Construction of RCC Drain Veeranjaneya Badavane Abbigere Village near Bus Stop) in Ward No.12 of Shettyhalli Sub Division, BBMP, Bangalore.

Reference : EE/DD/WO/112/2015-16 Dated: 31.03.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 03.05.2016

Date of Testing : 05.05.2016

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.50	90-100	90-100	90-100	95-100
2.36	74.60	60-95	75-100	85-100	95-100
1.18	52.30	30-70	55-90	75-100	90-100
600 Micron	24.80	15-34	35-59	60-79	80-100
300 Micron	9.60	5-20	8-30	12-40	15-50
150 Micron	4.10	0-10	0-10	0-10	0-15

*Information is furnished by the Customer/Representative.

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/KRIDL/W.No.12/CSR-05/029m/AGG/GR/2016-17 : 05.05.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	: Emergency Reserve Fund (Desilting and Construction of RCC Drain Veeranjaneya Badavane Abbigere Village near Bus Stop) in Ward No.12 of Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: EE/DD/WO/112/2015-16 Dated: 31.03.2016
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm)
Sample Received on	: 03.05.2016
Date of Testing	: 05.05.2016

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.70	95-100	85-100
20	42.70	30-70	0-20
10	15.60	10-35	0-5
4.75	3.20	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/KRIDL/W.No.12/STEEL/2016-17 07.05.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	:	Emergency Reserve Fund (Desilting and Construction of RCC Drain Veeranjaneya Badavane Abbigere Village near Bus Stop) in Ward No.12 of Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	EE/DD/WO/112/2015-16 Dated: 31.03.2016
Date of Test	:	07.05.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	8	0.40	510	552	13.05	O.K	O.K

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Job No.: CTCE/BBMP/KRIDL/W.No.12/STEEL/2016-17 07.05.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	:	Emergency Reserve Fund (Desilting and Construction of RCC Drain Veeranjaneya Badavane Abbigere Village near Bus Stop) in Ward No.12 of Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	EE/DD/WO/112/2015-16 Dated: 31.03.2016
Date of Test	:	07.05.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.20	O.K	O.K

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Job No.: CTCE/BBMP/KRIDL/W.No.12/CSR-05/029m/CUBE/2016-17 08.06.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*Customer : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*Agency : **Technical Manager (West),** KRIDL, Bangalore.

*Name of the work : Emergency Reserve Fund (Desilting and Construction of RCC Drain Veeranjaneya Badavane Abbigere Village near Bus Stop) in Ward No.12 of Shettyhalli Sub Division, BBMP, Bangalore.

Reference : EE/DD/WO/112/2015-16 Dated: 31.03.2016

*Sample ID : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 08.06.2016

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	11.05.2016	08.06.2016	8.123	493.5	21.93
2	11.05.2016	08.06.2016	8.367	518.6	23.05
3	11.05.2016	08.06.2016	8.245	505.2	22.45

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/KRIDL/W.No.12/CSR-05/029m/CUBE/2016-17 10.06.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*Customer : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*Agency : **Technical Manager (West),** KRIDL, Bangalore.

*Name of the work : Emergency Reserve Fund (Desilting and Construction of RCC Drain Veeranjaneya Badavane Abbigere Village near Bus Stop) in Ward No.12 of Shettyhalli Sub Division, BBMP, Bangalore.

Reference : EE/DD/WO/112/2015-16 Dated: 31.03.2016

*Sample ID : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 10.06.2016

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	13.05.2016	10.06.2016	8.263	502.6	22.34
2	13.05.2016	10.06.2016	8.384	515.2	22.90
3	13.05.2016	10.06.2016	8.478	529.7	23.54

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Job No.: CTCE/BBMP/KRIDL/W.No.12/CSR-05/029m/Pre Slab/2016-17 18.05.2016

TEST REPORT CONCRETE CORE (PRECAST SLAB)

* Name of Customer : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

* Name of Agency : **Technical Manager (West),** KRIDL, Bangalore.

* Name of work : Emergency Reserve Fund (Desilting and Construction of RCC Drain Veeranjaneya Badavane Abbigere Village near Bus Stop) in Ward No.12 of Shettyhalli Sub Division, BBMP, Bangalore.

* Reference : EE/DD/WO/112/2015-16 Dated: 31.03.2016

Techinical Reference : IS:516-1959 (Reaffirmed 2008), SP-24:1983.

Sample ID : Precast Slab

Sample Received on : 13.05.2016

Date of Testing : 18.05.2016

Grade of Concrete : M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	78.00	0.388	2533.42	1.56	0.952	31.65	16.12	17.41	18.28	22.85
2	50.00	79.00	0.396	2552.93	1.58	0.955	32.50	16.55	17.88	17.07	21.33
3	50.00	80.00	0.405	2578.31	1.60	0.957	33.70	17.16	18.54	17.74	22.17

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